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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Edward J. Panelli

Serial No.: 09/683,791

Filed: February 14, 2002

For: Method and Apparatus for Performing
Economic Analysis of a Radiological
Image Archiving System

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§ Group Art Unit: 3626
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§ Examiner: Glass, Russell S.
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§ Atty. Docket: GEMS:0158
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Floron C. Faries
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APPEAL BRIEF PURSUANT TO 37 C.F.R. §§ 41.31 AND 41.37

This Appeal Brief is being filed in furtherance to the Notice of Appeal mailed on October 22, 2007 and received by the Patent Office on October 26, 2007, and in reply to the Notice of Panel Decision from Pre-Appeal Brief Review mailed on December 3, 2007.

The Commissioner is authorized to charge the requisite fee of \$510.00, and any additional fees which may be necessary to advance prosecution of the present application, to Account No. 50-2401; Order No. 15EC6142-1 (GEMS:0158).

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1. **REAL PARTY IN INTEREST**

The real party in interest is General Electric Company, the Assignee of the above-referenced application by virtue of the Assignment recorded at reel 012393, frame 0515, and dated February 14, 2002. Accordingly, General Electric Company will be directly affected by the Board's decision in the pending appeal.

2. **RELATED APPEALS AND INTERFERENCES**

Appellants are unaware of any other appeals or interferences related to this Appeal. The undersigned is Appellants' legal representative in this Appeal.

3. **STATUS OF CLAIMS**

Claims 1-13 and 15-32 are currently under final rejection and, thus, are the subject of this Appeal. Claim 14 has been cancelled.

4. **STATUS OF AMENDMENTS**

As the instant claims have not been amended since the last Final Office Action, there are no outstanding amendments to be considered by the Board.

5. **SUMMARY OF CLAIMED SUBJECT MATTER**

The present invention relates generally to a method and apparatus for providing purchasing information to a customer that stores radiological images, and more particularly, to a method and apparatus to enable a customer that stores radiological images on film to perform an economic analysis of converting to a digital radiological image storing system. *See* Application, page 1, lines 6-10. The Application contains five independent claims, namely, claims 1, 13, 20, 23, and 29, all of which are the subject of this Appeal. The subject matter of these claims is summarized below.

Independent claim 1 recites an electronic information system (e.g., 26, 28) to enable a radiological image archiving system supplier to provide a customer with economic information regarding radiological image archiving system (see PACS 10 in

Figure 1 for an exemplary archiving system) provided by the supplier, the information system including: a query page (e.g., 38) stored in the electronic information system, wherein the electronic information system provides the query page to the customer (e.g., at 30) via an electronic communication system (e.g., 32, 34, 36), wherein the query page comprises at least one question (e.g., 40, 44, 48, 52, 56) designed, when completed (e.g., 42, 46, 50, 54, 58) by the customer (e.g., sent by clicking virtual button 60), to enable the information system to determine a customer's radiological imaging system usage over a period of time; and an application (e.g., managed via server 34) stored in the electronic information system, wherein the application establishes an expected cost reduction (e.g., Figure 5; boxes 92, 96) resulting from using a supplier's radiological image archiving system based on the customer's radiological imaging system usage (e.g., Figure 4). *See* Application, page 5, ¶ 17, line 23 – page 10, ¶ 29, line 21; Figures 2-5.

Independent claim 13 recites a computer program, wherein the computer program is stored in a tangible medium, wherein the computer program is adapted to enable an electronic information system (e.g., 26, 28) to establish a customer's expected cost reductions (e.g., Figure 5) over a period of time (e.g., one year) resulting from usage (e.g., Figure 4) of a supplier's radiological image archiving system (see PACS 10 in Figure 1 for an exemplary archiving system). *See* Application, page 5, ¶ 17, line 23 – page 10, ¶ 29, line 21; Figures 2-5.

Independent claim 20 recites a method of providing a customer with economic data regarding a supplier's radiological image archiving system, the method including the acts of: storing a query page (e.g., 38) adapted to elicit radiological imaging system information (e.g., 40, 44, 48, 52, 56) from a customer on an electronic information system (e.g., 26, 28); enabling a customer to access and complete (e.g., 42, 46, 50, 54, 58) the query page (e.g., sent by clicking virtual button 60) via an electronic communication system (e.g., 32, 34, 36); and storing a computer program operable to establish an economic benefit (e.g., Figure 5; boxes 92, 96, 100) of purchasing a supplier's radiological image archiving system

(see PACS 10 in Figure 1 for an exemplary archiving system) based on the radiological imaging system information (e.g., Figure 4) received from a customer on the electronic information system. *See* Application, page 5, ¶ 17, line 23 – page 10, ¶ 29, line 21; Figures 2-5.

Independent claim 23 recites an electronic information system (e.g., 26, 28), including: a query page (e.g., 38) stored in the electronic information system, wherein the electronic information system provides the query page to the customer via an electronic communication system (e.g., 32, 34, 36), wherein the query page comprises at least one question (e.g., 40, 44, 48, 52, 56) designed, when completed (e.g., 42, 46, 50, 54, 58) by the customer (e.g., sent by clicking virtual button 60), to enable the information system to establish an amount of radiological imaging film consumed by a customer over a specified period of time; and an application (e.g., managed via server 34) stored in the electronic information system, wherein the application establishes an expected reduction (e.g., box 78 minus box 86, box 82 minus box 90, box 92) in radiological imaging film consumption due to use of a radiological image archiving system (e.g., storage size in 64, price in 98) provided by a supplier of radiological image archiving systems (see PACS 10 in Figure 1 for an exemplary archiving system). *See* Application, page 5, ¶ 17, line 23 – page 10, ¶ 29, line 21; Figures 2-5.

Independent claim 29 recites an electronic information system (e.g., 26, 28), including: a query page (e.g., 38) stored in the electronic information system, wherein the electronic information system provides the query page to the customer via an electronic communication system (e.g., 32, 34, 36), wherein the query page comprises at least one question (e.g., 40, 44, 48, 52, 56) designed, when completed (e.g., 42, 46, 50, 54, 58) by the customer (e.g., sent by clicking virtual button 60), to enable the information system to establish an amount of storage capacity (e.g., 64) in a digital radiological image archiving system (see PACS 10 in Figure 1 for an exemplary archiving system) corresponding to an amount (e.g., box 46 times box 50 times box 58) of radiological images produced by a

customer over a specified time period. *See* Application, page 5, ¶ 17, line 23 – page 10, ¶ 29, line 21; Figures 2-5.

6. **GROUND OF REJECTION TO BE REVIEWED ON APPEAL**

First Ground of Rejection for Review on Appeal:

Appellants respectfully urge the Board to review and reverse the Examiner's first ground of rejection in which the Examiner rejected claims 1-5, 7-11, and 13-31 under 35 U.S.C. § 103(a) as being unpatentable over Sarno, U.S. Publication No. 2002/0042751 (hereinafter "Sarno") in view of Jamroga et al., U.S. Patent No. 6,574,742 (hereinafter "Jamroga").

Second Ground of Rejection for Review on Appeal:

Appellants respectfully urge the Board to review and reverse the Examiner's second ground of rejection in which the Examiner rejected claim 6 under 35 U.S.C. § 103(a) as being unpatentable over Sarno in view of Jamroga, and further in view of Wong et al., U.S. Patent No. 6,260,021 (hereinafter "Wong").

Third Ground of Rejection for Review on Appeal:

Appellants respectfully urge the Board to review and reverse the Examiner's third ground of rejection in which the Examiner rejected claims 12 and 32 under 35 U.S.C. § 103(a) as being unpatentable over Sarno in view of Jamroga, and further in view of Funahashi, U.S. Patent No. 6,820,100 (hereinafter "Funahashi").

7. **ARGUMENT**

As discussed in detail below, the Examiner has improperly rejected the pending claims. Further, the Examiner has misapplied long-standing and binding legal precedents and principles in rejecting the claims under Section 103. Accordingly, Appellants respectfully request full and favorable consideration by the Board, as Appellants strongly believe that claims 1-13 and 15-32 are currently in condition for allowance.

A. Ground of Rejection No. 1:

The Examiner rejected claims 1-5, 7-11, and 13-31 under 35 U.S.C. § 103(a) as being unpatentable over Sarno, U.S. Publication No. 2002/0042751 (hereinafter “Sarno”) in view of Jamroga et al., U.S. Patent No. 6,574,742 (hereinafter “Jamroga”). All of the present independent claims were rejected under this first ground of rejection. Appellants respectfully traverse this rejection.

Legal Precedent

The burden of establishing a *prima facie* case of obviousness falls on the Examiner. *Ex parte Wolters and Kuypers*, 214 U.S.P.Q. 735 (B.P.A.I. 1979). To establish a *prima facie* case, the Examiner must show that a combination of references includes *all* of the claimed elements, and also a convincing line of reason as to why one of ordinary skill in the art would have found the claimed invention to have been obvious in light of the teachings of the references. *See Ex parte Clapp*, 227 U.S.P.Q. 972 (B.P.A.I. 1985). Further, the Supreme Court has recently stated that the obviousness analysis should be explicit. *See KSR Int’l Co. v. Teleflex, Inc.*, 82 U.S.P.Q.2d 1385 (U.S. 2007) (“[R]jections based on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.”) (quoting *In re Kahn*, 441 F.3d 977,988 (Fed. Cir. 2006)).

Features of Independent Claims 1, 13, and 20 Missing from Cited References

Initially, Appellants would like to clarify that while the present application may be directed, in part, to the providing of a radiological image archiving system from a supplier to a customer, the present claims are expressly directed to a query page that elicits information about the customer’s *upstream* radiological imaging system. The Examiner relied on the Jamroga reference to teach the upstream imaging system. However, Jamroga is directed to the downstream archiving system. In contrast, the present claims do not provide for asking questions about a customer’s archiving system,

as apparently thought by the Examiner. Instead, the claims are directed to asking questions about the customer's *upstream imaging* system. The present invention provides beneficial techniques for establishing the imaging archiving needs of the customer, and potential advantages of a new image archiving system, not by asking questions about the customer's current archiving system, but by asking questions about the customer's upstream imaging system. Lastly, Appellants believe that the Jamroga reference teaches away from the providing of a radiological imaging archiving system (e.g., PACS 10 in Figure 1 of the present application), as claimed. *See, e.g., Jamroga*, col. 3, lines 27-65; *see also W.L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), *cert. denied*, 469 U.S. 851 (1984) (explaining that a prior art reference must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention).

Turning to the claims, the present independent claim 1 recites, *inter alia*, “the query page comprises at least one question designed, when completed by the customer, to enable the information system to *determine a customer's radiological imaging system usage* over a period of time.” Independent claim 13, as amended, recites, *inter alia*, “the query page being adapted to *elicit a customer's radiological imaging system usage* over the period of time.” Independent claim 20, as amended, recites, *inter alia*, “a query page adapted to *elicit radiological imaging system usage information* from a customer on an electronic information system.”

In the Final Office Action, the Examiner cited paragraphs 12, 15, 17, and 18 of the Sarno reference as disclosing these features. However, upon review of the cited paragraphs, it is clear that while Sarno discloses an electronic user interface for eliciting generic user information, Sarno is absolutely devoid of a query page designed to elicit or determine existing *usage* of a customer's *radiological imaging system*. Indeed, the Examiner acknowledged that Sarno fails to disclose a radiological image archiving system,” much less teach or suggest a query form designed to elicit or determine usage of

an upstream radiological *imaging* system, as claimed *See*, Office Action, page 3 (emphasis added).

In an effort to salvage the rejection, the Examiner stated that a radiological imaging system “is well known in the art as evidenced by Jamroga.” *See*, Office Action, page 3 (citing Jamroga, col. 1, lines 48-65). However, this cited portion of the Jamroga merely discusses the Digital Imaging and Communications in Medicine (DICOM) standard. The cited portion is absolutely devoid of a teaching or suggestion to establish *usage of a customer’s radiological imaging system* over a period of time. Moreover, while Jamroga discusses benefits of converting from a film-based archive system to a digital-based archive system, and mentions that images may be identified by various information including the data and time the image was generated, it is plain that Jamroga never addresses establishing a customer’s usage of a radiological imaging system over time. *See* Office Action, page 6 (citing Jamroga, col. 9, lines 23-33). Neither Sarno nor Jamroga, whether taken alone or in combination, teach or suggest a query page or form (e.g., having a question) used to elicit or determine a customer’s radiological imaging system usage.

In the “Response to Arguments” section of the Final Office Action, the Examiner did not find Appellant’s arguments persuasive. The Examiner stated:

As per applicants argument that Sarno fails to disclose a query page being adapted to elicit a customer’s system usage over the period of time, it is submitted that Sarno discloses such a system. Sarno discloses a survey generator with a series of questions is a query page, and figs. 1C and 1E show information such as historic and future activity costs with associated savings projections over time, (Sarno, figs. 1C, 1E, ¶ 12, 17, 18). Such information is used by Sarno to establish a cost-savings projection for a given period of time based on system usage, storage capacity, or amount of images stored. As stated in the previous office action, it is the combination of such financial analysis with the well-known radiological

image archiving system of Jamroga that forms the crux of the rejection. In response to applicant's arguments against the references individually, one cannot show non-obviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merk & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Final Office Action, page 11.

To the contrary, Appellant respectfully emphasizes that both cited references, whether taken alone or in combination, are absolutely devoid of query page that elicits usage-time information about an *imaging system*. Indeed, as the Examiner acknowledged, Sarno does not disclose the eliciting of information about a radiological *imaging system* usage per time. Further, the secondary reference, Jamroga, is directed to the delivery and storage of images, and not to the upstream acquisition of the images. This is implicitly acknowledged by the Examiner in his conclusion that Jamroga discloses an image archiving system. See Final Office Action, page 11 (emphasis added). It should be emphasized it is impractical or even impossible in the specific context of Jamroga (which is directed to the downstream handling of images) to determine the usage of the upstream image acquisition systems. To be sure, neither reference, whether taken alone or in combination, teaches or suggests information about a radiological *imaging system* usage over time.

Features of Independent Claims 23 and 29 Missing from Cited References

Independent claim 23 recites, *inter alia*, “wherein the query page comprises at least one question designed, when completed by the customer, to enable the information system to establish an *amount of radiological imaging film consumed by a customer over a specified period of time*.” Independent claim 29 recites, *inter alia*, “wherein the query page comprises at least one question designed, when completed by the customer, to enable the information system to establish an amount of storage capacity in a digital

radiological image archiving system corresponding to an *amount of radiological images produced by a customer over a specified time period.*”

In contrast, as discussed above, the cited combination does not disclose the eliciting of information about a customer’s radiological system usage. Clearly, the references do not teach or suggest establishing the amount of radiological film consumed by a customer over time, or an amount of radiological images produced by a customer over a specified period of time.

Request Withdrawal of Rejection

In view of the foregoing, Appellant believes all independent claims (and their respective dependent claims) are patentable over the cited combination. Therefore, Appellant respectfully requests the Board direct the Examiner to withdraw the foregoing rejection and allow the claims.

B. Ground of Rejection No. 2:

The Examiner rejected dependent claim 6 under 35 U.S.C. § 103(a) as being unpatentable over Sarno in view of Jamroga, and further in view of Wong et al., U.S. Patent No. 6,260,021 (hereinafter “Wong”). Appellants respectfully traverse this rejection.

Appellant does not believe that Wong obviates the deficiencies of the cited combination discussed above with respect to independent claim 1. Accordingly, claim 6 is believed to be patentable for at least its dependency on allowable base claim 1. Appellant respectfully requests that the Board direct the Examiner withdraw the rejection of claim 6 and allow the claim.

C. **Ground of Rejection No. 3:**

The Examiner rejected dependent claims 12 and 32 under 35 U.S.C. § 103(a) as being unpatentable over Sarno in view of Jamroga, and further in view of Funahashi, U.S. Patent No. 6,820,100 (hereinafter “Funahashi”).

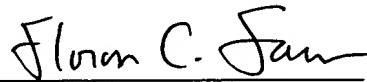
Appellant does not believe that Funahashi obviates the deficiencies of the cited combination discussed above with respect to the independent claims. Accordingly, claims 12 and 32 are believed to be patentable for at least their dependency on an allowable base claim. Appellant respectfully requests that the Board direct the Examiner withdraw the rejection of claims 12 and 32, and allow the claims.

Conclusion

Appellants respectfully submit that all pending claims are in condition for allowance. However, if the Examiner or Board wishes to resolve any other issues by way of a telephone conference, the Examiner or Board is kindly invited to contact the undersigned attorney at the telephone number indicated below.

Respectfully submitted,

Date: January 3, 2008



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8. **APPENDIX OF CLAIMS ON APPEAL**

1. An electronic information system to enable a radiological image archiving system supplier to provide a customer with economic information regarding radiological image archiving system provided by the supplier, the information system comprising:

a query page stored in the electronic information system, wherein the electronic information system provides the query page to the customer via an electronic communication system, wherein the query page comprises at least one question designed, when completed by the customer, to enable the information system to determine a customer's radiological imaging system usage over a period of time; and

an application stored in the electronic information system, wherein the application establishes an expected cost reduction resulting from using a supplier's radiological image archiving system based on the customer's radiological imaging system usage.

2. The system as recited in claim 1, wherein the application establishes a payback period for purchasing a supplier's radiological image archiving system based on the expected cost reduction resulting from using the supplier's radiological image archiving system and on cost of the supplier's radiological image archiving system.

3. The system as recited in claim 2, wherein the application establishes a suggested radiological image archiving system based on the customer's radiological imaging system usage.

4. The system as recited in claim 3, wherein the plurality of questions are designed to establish a desired digital storage capacity for the supplier's radiological image archiving system based on the customer's radiological imaging system usage.

5. The system as recited in claim 1, wherein the application establishes the expected cost reduction based on a reduction in radiological imaging film usage resulting from usage of the supplier's radiological image archiving system.

6. The system as recited in claim 1, wherein the application is written in Java script.
7. The system as recited in claim 1, wherein the query page is adapted to elicit a quantity of radiological examinations performed over a specified period of time by the customer's radiological image archiving system.
8. The system as recited in claim 7, wherein the specified period of time is one day.
9. The system as recited in claim 1, wherein the query page is adapted to elicit a quantity of radiological images taken per radiological examination.
10. The system as recited in claim 1, wherein the query page is adapted to elicit a number of days a customer uses a radiological imaging system over a specified period of time.
11. The system as recited in claim 1, wherein the electronic communication system is the Internet.
12. The system as recited in claim 1, wherein the expected cost reduction comprises a reduction in optical discs used in a customer's existing radiological image archiving system.
13. A computer program, wherein the computer program is stored in a tangible medium, wherein the computer program is adapted to enable an electronic information system to establish a customer's expected cost reductions over a period of time resulting from usage of a supplier's radiological image archiving system, wherein the computer program directs the electronic information system to provide a query page to the customer

via an electronic communication system, the query page being adapted to elicit a customer's radiological imaging system usage over the period of time.

15. The computer program as recited in claim 13, wherein the computer program is adapted to establish the customer's expected cost reductions from usage of a supplier's radiological image archiving system based on the customer's radiological imaging system usage over the period of time.

16. The computer program as recited in claim 15, wherein the electronic information system is the Internet.

17. The computer program as recited in claim 13, wherein the query page is adapted to establish digital storage capacity for a supplier's radiological image archiving system to store radiological images produced over the period of time in a digital format.

18. The computer program as recited in claim 13, wherein the computer program is adapted to establish a payback period for purchasing a supplier's radiological image archiving system based on the expected cost reductions resulting from using the supplier's radiological image archiving system and on cost of the supplier's radiological image archiving system.

19. The computer program as recited in claim 13, wherein the computer program is adapted to establish a desired radiological image archiving system from among a plurality of radiological imaging archiving systems based on the customer's radiological imaging system usage.

20. A method of providing a customer with economic data regarding a supplier's radiological image archiving system, the method comprising the acts of:

storing a query page adapted to elicit radiological imaging system usage information from a customer on an electronic information system;

enabling a customer to access and complete the query page via an electronic communication system; and

storing a computer program operable to establish an economic benefit of purchasing a supplier's radiological image archiving system based on the radiological imaging system usage information received from a customer on the electronic information system.

21. The method as recited in claim 20, further comprising storing a computer program operable to establish a cost of purchasing a supplier's radiological image archiving system based on the radiological imaging system information received from the customer.

22. The method as recited in claim 21, further comprising storing a computer program operable to establish an expected payback period from purchasing a supplier's radiological image archiving system based on the economic benefit and the cost of purchasing the radiological image archiving system.

23. An electronic information system, comprising:
a query page stored in the electronic information system, wherein the electronic information system provides the query page to the customer via an electronic communication system, wherein the query page comprises at least one question designed, when completed by the customer, to enable the information system to establish an amount of radiological imaging film consumed by a customer over a specified period of time; and

an application stored in the electronic information system, wherein the application establishes an expected reduction in radiological imaging film consumption due to use of a radiological image archiving system provided by a supplier of radiological image archiving systems.

24. The system as recited in claim 23, wherein the application establishes an expected cost reduction based on the expected reduction in archival radiological imaging film consumption.

25. The system as recited in claim 23, wherein the radiological imaging archiving system provided by the supplier stores radiological images in a film-less format.

26. The system as recited in claim 24, wherein the application establishes an expected cost of the radiological image archiving system provided by the supplier.

27. The system as recited in claim 25, wherein the expected cost is based on the amount of radiological imaging system usage by the customer.

28. The system as recited in claim 26, wherein the application establishes a payback period for the radiological image archiving system based on the expected cost reduction and the expected cost of the radiological image archiving system.

29. An electronic information system, comprising:
a query page stored in the electronic information system, wherein the electronic information system provides the query page to the customer via an electronic communication system, wherein the query page comprises at least one question designed, when completed by the customer, to enable the information system to establish an amount of storage capacity in a digital radiological image archiving system corresponding to an amount of radiological images produced by a customer over a specified time period.

30. The system as recited in claim 29, comprising an application stored in the electronic information system, wherein the application establishes an expected cost savings associated with storing radiological images in a digital radiological imaging system.

31. The system as recited in claim 30, wherein the application establishes an expected cost savings based on a decrease in radiological imaging film consumption using the digital radiological image archiving system.

32. The system as recited in claim 30, wherein the application establishes an expected cost savings based on a decrease in optical disc consumption for archiving of radiological images.

9. **EVIDENCE APPENDIX**

None.

10. **RELATED PROCEEDINGS APPENDIX**

None.